

ABSTRACT

A method is provided for IP-based wireless networks to support dynamic assignment of IP addresses to wireless mobile stations without broadcasting messages over the air and without modifications to standard IP for dynamic IP address assignment. When a mobile station enters a new cell, it sends a request to the base station for a new IP address. At the base station, DHCP proxy servers intercept and process broadcast DHCP messages so they are transmitted only to the address server and are blocked from being sent to the other base stations in the wired IP Network for broadcast to other mobile stations. When the address server creates a server-to-client message with the requested address and places it on the wired IP Network, DHCP proxy servers at the base stations convert the broadcast DHCP messages to unicast messages for transport over the air to only those mobile stations that are currently requesting new IP addresses or verifying their current IP addresses. The conversion is based on information contained in DHCP messages which passed through the base stations.